

What is claimed is:

1. A personal computer client system, for a data network including at least one personal computer client system and a server having an internet protocol destination address, comprising:

a central processing unit (CPU);

memory;

a non-volatile memory storage device for storing the destination address of the server;

and

a network adaptor with a reception portion connected to the data network for receiving network packet signals on the data network from the server in a predefined analog format and decoding the network packet signals having the internet protocol address of the server to a digital format and providing the internet protocol address of the server to the memory storage device to store the destination address of the server.

2. The personal computer client system according to Claim 1, wherein the data network conforms to the Ethernet specification and the network packet signals on the network are digitally encoded analog signals.

3. The personal computer client system according to Claim 1, further including auxiliary logic as a part of the network adaptor for applying network packet signals periodically to indicate selected state information regarding the personal computer client system.

4. The personal computer client system according to Claim 1, further including auxiliary logic as a part of the network adaptor and electrically connected to be powered and active during a state of less than full power being provided to the CPU of the personal computer

4 client system to detect network packet signals received by the personal computer client
5 system that has data including the server's internet protocol destination address.

1 5. The personal computer client system according to Claim 4, wherein the network
2 adaptor provides the data including the server's internet protocol destination address to the
3 memory storage device for storing the data.

1 6. The personal computer client system according to Claim 1, wherein the network
2 adaptor includes a physical layer connected to the data network for receiving and transmitting
3 network data packets to and from the server on the network side of the physical layer and for
4 transmission of received network data packets, including data related to the server's internet
5 protocol destination address, on the client side of the physical layer on a media independent
6 interface bus to an auxiliary logic as a part of the network adaptor to detect network data
7 packets received by the personal computer client system that have data including the server's
8 internet protocol destination address.

1 7. The personal computer client system according to Claim 6, further including a non-
2 volatile storage device for storing data including the server's internet protocol destination
3 address.

1 8. The personal computer client system according to Claim 7, wherein the auxiliary logic
2 includes a micro controller having state machines for managing data packet reception, data
3 packet transmission and non-volatile storage device transmission.

1 9. The personal computer client system according to Claim 8, further including in the
2 personal computer client system a PCI bus, an ISA bus, a PCI/ISA bridge, and wherein the
3 micro controller has a state machine for managing bus transmission between the network

4 adaptor and the PCI bus and the ISA bus.

1 10. A method for providing update configuration data for a client personal computer system
2 in a data network including a server, having configuration data including an internet protocol
3 destination address, and at least one client personal computer system having a storage
4 device for storing configuration data and a micro controller for receiving network signal
5 packets from the server and for configuring the client personal computer system with updated
6 configuration data, including the internet protocol destination address of the server,
7 comprising the steps of:

8 receiving a network signal packet sent from the server in the micro controller in the at
9 least one client personal computer system;

10 determining that the network signal packet includes the server's internet protocol
11 destination address;

12 determining that the network signal packet is a match for the any one of the at least one
13 client personal computer system; and

14 updating the storage device of the any one of the at least one client personal computer
15 system with the included internet protocol destination address of the server.

1 11. The method as defined in Claim 10, wherein, after the step of receiving the network
2 signal packet, there is a step of authenticating the encryption of the network signal packet to
3 authenticate the presence of encrypted data in the network signal packet.

1 12. The method as defined in Claim 11, wherein, after the step of authenticating the
2 encryption of the network packet, there is a step of validation of the data authenticated in the
3 step of authenticating the encryption of the network packet.

1 13. The method as defined in Claim 12, wherein in determining that the network signal
2 packet includes the server's internet protocol destination address, the presence in the network
3 signal packet of configuration identification and configuration data is determined.

1 14. The method as defined in Claim 13, wherein in the step of determining whether the
2 network signal packet is a match for any one of the at least one client personal computer
3 system, there is a first determination as to whether the network signal packet is identified to
4 any one of the least one client personal computer systems and a second determination as
5 to whether the network signal packet is identified to a plurality of client personal computer
6 systems.

1 15. A method for providing update configuration data for a client personal computer system
2 in a data network including a server, having configuration data including an internet protocol
3 destination address, and at least one client personal computer system having a storage
4 device for storing configuration data and a micro controller for receiving network signal
5 packets from the server and for configuring the at least one client personal computer system
6 with updated configuration data, including the internet protocol destination address of the
7 server, comprising the steps of:

8 receiving a network signal packet sent from the server in the micro controller in the at
9 least one client personal computer system;

10 authenticating encryption of the network signal packet to authenticate the presence
11 of encrypted data in the network signal packet;

12 validating the data authenticated in the step of authenticating the encryption of the
13 network signal packet;

14 determining that the network signal packet includes the server's internet protocol
15 destination address by determining the presence in the network signal packet of configuration
16 identification and configuration data for the server;

17 determining that the network signal packet is a match for the any one of the at least one
18 client personal computer systems by first determining that the network signal packet is
19 identified to a specific one of the at least one client personal computer systems and otherwise
20 determining as to whether the network signal packet is identified to a plurality of client
21 personal computer systems ; and
22 updating the storage device of any identified client personal computer systems with the
23 included internet protocol destination address of the server.

1 16. A personal computer client system, for a data network including at least one personal
2 computer client system and a server, having an internet protocol destination address,
3 connected to each other through a network communication system, comprising:

4 a central processing unit (CPU);
5 memory;
6 a memory controller connecting the memory to the CPU;
7 a PCI bus;
8 a PCI bridge connecting the PCI bus to the memory controller and the CPU;
9 an ISA bus;
10 a PCI/ISA bridge connecting the ISA bus to the PCI bus;
11 a power management device connected to a power supply device;
12 a network adapter connected to the PCI bus and the network communication system;
13 a physical layer as a part of the network adapter connected to the network
14 communication system to receive network packet signals from the server;
15 a media access controller as a part of the network adapter connected to the PCI bus;
16 a media independent interface (MII) bus connected to the physical layer and the media
17 access controller;
18 an EEPROM for storing the destination address of the server; and
19 a logic module connected to the EEPROM and to the MII bus for receiving and

20 detecting network packet signals having data related to the internet protocol destination
21 address of the server and providing the data related to the internet protocol address of the
22 server to the EEPROM to store the destination address of
23 the server.

1 17. A personal computer client system, for a local area network (LAN) including at least one
2 personal computer client system and a server having an internet protocol destination address,
3 comprising:

4 a central processing unit (CPU);
5 memory;
6 a non-volatile memory storage device for storing the destination address of the server;
7 and

8 a network adaptor with a reception portion connected to the data network for receiving
9 network packet signals on the data network from the server in a predefined analog format and
10 decoding the network packet signals having the internet protocol address of the server to a
11 digital format and providing the internet protocol address of the server to the memory storage
12 device to store the destination address of the server.

1 18. The personal computer client system according to Claim 17, further including auxiliary
2 logic as a part of the network adaptor for applying network packet signals periodically to
3 indicate selected state information regarding the personal computer client system.

1 19. The personal computer client system according to Claim 17, further including auxiliary
2 logic as a part of the network adaptor and electrically connected to be powered and active
3 during a state of less than full power being provided to the CPU of the personal computer
4 client system to detect network packet signals received by the personal computer client
5 system that has data including the server's internet protocol destination address.

1 20. The personal computer client system according to Claim 17, wherein the network
2 adaptor includes a physical layer connected to the LAN network for receiving and transmitting
3 network data packets to and from the server on the network side of the physical layer and for
4 transmission of received network data packets, including data related to the server's internet
5 protocol destination address, on the client side of the physical layer on a media independent
6 interface bus to an auxiliary logic as a part of the network adaptor to detect network data
7 packets received by the personal computer client system that have data including the server's
8 internet protocol destination address.

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